

RF EXPOSURE Test Report

Product: ST MAX

Trade Mark: SKYTRAK™

Model Number: SKYTRAK MAX

FCC ID: 2AH3O-SKYTRAKMAX

Prepared for

Rapsodo Pte Ltd

Blk 20 Ayer Rajah Crescent, #08-05, singapore 139964

Prepared by

Shenzhen HongBiao Certification& Testing Co., Ltd

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TEST RESULT CERTIFICATION

Applicant's Name..... : Rapsodo Pte Ltd

Address : Blk 20 Ayer Rajah Crescent, #08-05, singapore 139964

Manufacturer's Name : Beyonics Precision Malaysia Sdn Bhd (Plant 1)

Address : Plot 4,8&9 Kawasan Perindustrian Kota Tinggi, Batu 2 Jalan
Lombong, 81900 Kota Tinggi Johor.

Product description

Product name : ST MAX

Model Number : SKYTRAK MAX

Standards : FCC CFR 47 PART 1 , 1.1310

FCC CFR 47 PART 2 , 2.1091

Test procedure : KDB 447498 D01 General RF Exposure Guidance v06

This device described above has been tested by Shenzhen HongBiao Certification& Testing Co., Ltd and the test results show that the equipment under test (EUT) is in compliance with the EMC requirements. And it is applicable only to the tested sample identified in the report.

Date of Test:

Date (s) of performance of tests : July 30, 2025~ Aug. 15, 2025

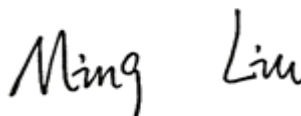
Test Result.....: **Pass**

Testing Engineer :



(Z o e S u)

Technical Manager :



(Ming Liu)

Authorized Signatory :



(L e o S u)

Revision History

[illegible]

1 General Description

1.1 Description of EUT

Product name:	ST MAX
Model name:	SKYTRAK MAX
Series Model:	N/A
Different of series model:	N/A
Operation frequency:	2.4G WiFi: IEEE 802.11b/g/n20: 2412~2462 MHz IEEE 802.11n40: 2422~2452 MHz 5G WiFi: U-NII-1: 5180 MHz to 5240 MHz U-NII-2A: 5260 MHz to 5320 MHz U-NII-2C: 5500 MHz to 5700 MHz
Modulation type:	2.4G WiFi: IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK) 5G WiFi: IEEE 802.11a/n: OFDM(64QAM, 16QAM, QPSK, BPSK) Radar: CW
Bit Rate of transmitter:	2.4G WiFi: IEEE 802.11b: Up to 11 Mbps IEEE 802.11g: Up to 54 Mbps IEEE 802.11n-HT20/HT40: Up to MCS15 5G WiFi: IEEE 802.11a: Up to 54 Mbps IEEE 802.11n-HT20/40: Up to MCS7
Antenna type:	2.4G&5G WiFi ANT1&2: FPC Antenna Radar: Integrated Patch Antenna
Antenna gain:	2.4G WiFi ANT1&2: 3dBi 5G WiFi ANT1&2: 4dBi Radar: 7dBi
Max. output power:	2.4G WiFi: 16.33dBm 5G WiFi: 17.54dBm Radar: 104.6dBμV/m
Hardware version:	Rev J
Software version:	V1.0
Battery:	DC 3.7V, 10000mAh
Power supply:	Input: 5V=2.5A
Adapter information:	N/A

1.2 Test Mode

Pretest Test Mode	Description of Mode
1	TX
2	/
3	/

1.3 Test Setup

See photographs of the test setup in the report for the actual setup and connections between EUT and support equipment.

1.4 Ancillary Equipment

Equipment	Model	S/N	Manufacturer
/	/	/	/

2 Test Facilities and Accreditations

2.1 Test Laboratory

Test Site	Shenzhen HongBiao Certification& Testing Co., Ltd
Test Site Location	Room 102, 201, Building 2, Yuanwanggu RFID Industrial Park, Tongguan Road, Tianliao Community, Yutang Street, Guangming District, Shenzhen, China
Telephone:	(86-755) 2998 9321
Fax:	(86-755) 2998 5110
FCC Registration No.:	CN1341
A2LA Certificate No.:	6765.01

2.2 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15°C~35°C
Relative Humidity:	20%~75%
Air Pressure:	98kPa~101kPa

2.3 Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

Measurement Frequency Range	U , (dB)	Note
RF frequency	2×10^{-5}	
RF power, conducted	± 0.57 dB	
Temperature	± 1 degree	
Humidity	± 5 %	

2.4 Test Software

Software name	Manufacturer	Model	Version
Conducted test system	MWRF-test	MTS 8310	2.0.0.0

3 RF Exposure

3.1 Standalone SAR test exclusion considerations

3.1.1. Limit

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b).

Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π = 3.1415926

R = distance between observation point and center of the radiator in cm(20cm)

P_d the limit of MPE, 1mW/cm².

If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

3.1.2. Test Result

2.4GWiFi:

Operation Frequency: IEEE 802.11b/g/n20: 2412~2462MHz,

IEEE 802.11n40: 2422~2452MHz,

Antenna Type: FPC Antenna;

2.4G WiFi antenna gain: 3dBi

Power density limited: 1mW/ cm²

5GWiFi:

Operation Frequency: IEEE 802.11a/n-HT20: 20MHz

IEEE 802.11n-HT40: 40MHz,

U-NII-1: 5180 MHz to 5240 MHz

U-NII-2A: 5260 MHz to 5320 MHz

U-NII-2C: 5500 MHz to 5700 MHz

Antenna Type: FPC Antenna;

WIFI antenna gain: 4dBi

R=20cm

mW=10^(dBm/10)

Radar:

24000-24250MHz

Antenna gain: 7dBi

2.4GWiFi: Antenna gain Numeric=10^(dBi/10)= 10^(3/10)=2.00

5GWiFi: Antenna gain Numeric=10^(dBi/10)= 10^(4/10)=2.51

Radar: Antenna gain Numeric=10^(dBi/10)= 10^(7/10)=5.01

2.4G WiFi: (Worst)

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna		Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain		Power density(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2412 (ANT1)	802.11g	17.54	17±1	18	63.10	3	2.00	0.02505	1
2412 (ANT1)	802.11n20	14.71	14±1	15	63.10	3	2.00	0.02414	1
2412 (ANT2)	802.11n20	14	14±1	15	31.623	3	2.00	0.02414	1

N20 Power density(mW/cm2) Sum=0.02414+0.02414=0.04828 mW/cm2

5G WiFi: (Worst)

Frequency (MHz)	Modulation	conducted power	Tune-up power	Max		Antenna		Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain		Power density(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
5180	802.11a	15.86	16±1	17	50.12	4	2.51	0.02505	1
5240	802.11n20	13.15	13±1	14	25.119	4	2.51	0.01255	1
5240	802.11n20	13.48	13±1	14	25.119	4	2.51	0.01255	1

N20 Power density(mW/cm2) Sum=0.01255+0.01255=0.0251mW/cm2

Radar: (Worst)

Channel Freq. (MHz)	Maximum field strength	conducted power	Tune-up power	Max		Antenna		Evaluation result at 20cm	Power density Limits
	dBμV/m	(dBm)	(dBm)	tune-up power		Gain		Power density(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
24000-24250	104.6	9.4	9±1	10	10	7	5.01	0.00997	1

Note: EIRP=dBμV/m-95.2=104.6-95.2=9.4 dBm

Conclusion:

NO	Maximum MPE Value					Limits (mW/cm ²)
	2.4GWiFi 802.11g (mW/cm ²)	2.4GWiFi 802.11n20 Sum (mW/cm ²)	5GWiFi 802.11a (mW/cm ²)	5GWiFi 802.11n20 Sum (mW/cm ²)	Radar (mW/cm ²)	
1	0.02505	0.04828	0.02505	0.0251	0.00997	1

Simultaneous transmit:

NO	Configurations	Maximum MPE Value			Limits
		2.4GWiFi 802.11n20 Sum (mW/cm ²)	Radar (mW/cm ²)	Transmit simultaneously	
1	2.4G+Radar	0.04828	0.00997	0.05825	1

NO	Configurations	Maximum MPE Value			Limits
		5GWiFi 802.11n20 (mW/cm ²)	Radar: (mW/cm ²)	Transmit simultaneously	
1	5G+Radar	0.0251	0.00997	0.03507	1

Note:

According to KDB 447498 D01 General RF Exposure Guidance v06, At the transmit simultaneously calculation method is as follows:

Transmit simultaneously MPE = Σ of MPE ratios

MPE ratios = Field strengths or power density / MPE limit at the test frequency

For the max result: $0.05825 \leq 1.0$ SAR, No SAR is required.

Host integrated overall module, maximum power reference to original radar module FCC ID: UXS-SMR3X3

******* END OF REPORT *******